

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method of representing motion in a sequence of digitized images comprising deriving a dense motion vector field for an image and performing vector quantization on the motion vector field wherein vector quantization is performed on vectors having components from at least two motion vectors in the motion vector field.
2. (original) A method as claimed in claim 1 wherein a motion vector is derived for pixel blocks sized less than an 8x8 pixel block.
3. (original) A method as claimed in claim 1 wherein a motion vector is derived for each pixel.
4. (original) A method as claimed in claim 1 wherein vector quantization is performed on the components of the motion vectors separately.
5. (original) A method as claimed in claim 1 comprising performing variable length coding after vector quantization.

6. (original) A method as claimed in claim 1 comprising identifying where motion discontinuities occur in the image.

7. (original) A method as claimed in claim 1 comprising processing the motion vector field to reduce the entropy of the vector field before vector quantization.

8. (original) A method as claimed in claim 7 wherein the motion discontinuities are used in the entropy-reduction processing.

9. (original) A method as claimed in claim 7 wherein entropy-reduction is performed by averaging neighbouring motion vectors.

10. (original) A method as claimed in claim 9 wherein a motion vector separated by a motion discontinuity is not used in the averaging.

11. (original) A method as claimed in claim 1 comprising generating and encoding a plurality of versions of a motion vector field at different resolutions.

12. (original) A method as claimed in claim 11 comprising sub-sampling the motion vector field to produce sub-sampled

versions of the field at a first, coarse, resolution and at a second, finer, resolution, coding the coarse resolution motion vector field, comparing the coarse resolution field with the finer resolution field to produce a residual error, and coding the residual error at the finer resolution.

Claims 13-19 (Canceled).

20. (Previously Presented) An encoder for encoding motion information for a sequence of digitized images according to a method as claimed in claim 1.

Claims 21-28 (Canceled).

29. (original) A decoder for decoding motion information for a sequence of digitized images encoded according to a method as claimed in claim 1.

Claims 30-34 (Canceled).

35. (original) A hybrid DCT-MC codec comprising an encoder according to claim 28 and a decoder according to claim 29.

Claims 36-37 (Canceled).

38. (Previously Presented) A method as claimed in claim 1 wherein vector quantization is performed on vectors, having components corresponding to x velocity components of the motion vectors for n neighbouring pixels or blocks, and/or components corresponding to y velocity components of the motion vectors for m neighbouring pixels or blocks, where n and m are greater than or equal to 2.

39. (Previously Presented) A method as claimed in claim 1 wherein vector quantization is performed on vectors having more than two components.

Claim 40 (Canceled).